

CLAIMS

1. A signal making and/or receiving device:

- (a) where including at least one emitter, receptor, feature, pixel, bump, tube, ball, or lens, the elements have a plurality of non uniform dimensions in width, height, shape, and distance between them on or in its surface,
- (b) where including at least one emitter, receptor, feature, pixel, bump, tube, ball, or lens, the elements can be arrayed in a periodic, irregular, non uniform pattern,
- (c) where including any ratios of sizes and shapes of a plurality of elements characterized by emitters, receptors, features, pixels, bumps, tubes, balls, lenses, the elements compared to at least one other element can be adjusted and varied while maintaining a non uniform periodic array,
- (d) where the elements, including at least one emitter, receptor, circuit, feature, bump, tube, dot, ball, or lens, can move in and out of a surface, side to side, and change shape and location, compared to each other and the surface,
- (e) where the rear surface includes curved, hyperbolic, parabolic, cycloidal, non uniform, periodic shapes in different areas, and in at least one position substantially behind similar shapes on the outer surface,
- (f) where the rear surface contains elements characterized by at least one emitter, receptor, circuit, data storage unit, bump, dot, pixel, tube, optic fiber, or lens, separated from each other by a plurality of non uniform distances, as can the outer surface and anywhere in between,
- (g) where the elements characterized by at least one emitter, receptor, data storage unit, bump, dot, pixel, tube, optic fiber, or lens, can be of varying sizes, shapes, orientations a plurality of which are non uniform,
- (h) where including emitting or receiving a signal the signal bending and/or reflecting means can vary in focal depth in a non uniform, irregular, periodic pattern in a plurality of positions,
- (i) where a plurality of the signal emitting and/or receiving elements are spread unevenly on the inner and outer surface,
- (j) where the elements defined herein can contain other elements defined herein on or in them, and so on as deeply as desired, including a periodic, aperiodic, or non uniform pattern,
- (k) where any emitter can be replaced by a receptor or vice versa,
- (l) where the elements, including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens, can be pushed from behind to change shape, and/or be pulled from behind and/or another direction to change shape,
- (m) where a plurality of the parts, including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens, can contain phosphor, ends of optic fibers, be polarized,

- (n) where the elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens, are directed in irregular orientations statically and/or dynamically,
- (o) where at least one of the elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens, is recessed in a tube,
- (p) where the elements, including at least one emitter, receptor, data storage unit, bump, dot, pixel, tube, optic fiber, or lens, can be curved or straight in a predetermined ratio,
- (q) where the elements, including at least one emitter, receptor, data storage unit, bump, dot, pixel, tube, optic fiber, or lens, can cross partially or wholly,
- (r) where the elements, including at least one emitter, receptor, data storage unit, bump, dots, pixel, tube, optic fiber, or lens, can be of the same or varying sizes in sections of a periodic or aperiodic irregular non uniform pattern.
- (s) where the elements, including at least one emitter, receptor, data storage unit, bump, dot, pixel, tube, optic fiber, or lens, can be circular in cross section or any shape, and alter cross section according to a stimulus,
- (t) where at least one element, characterized by at least one emitter, receptor, data storage unit, bump, dot, pixel, tube, optic fiber, or lens, can be long and narrow, or short and wide,
- (u) where at least one element, characterized as at least one emitter, receptor, data storage unit, bump, dot, pixel, tube, optic fiber, or lens, can move around, change position, and point in different directions on a surface independently or in a predetermined pattern with other elements,
- (v) where at least one element, characterized as at least one emitter, receptor, data storage unit, bump, dot, pixel, tube, optic fiber, or lens, can change orientation according to a stimulus,
- (w) where at least one element, characterized by at least one emitter, receptor, data storage unit, bump, dot, pixel, tube, optic fiber, or lens, can flex while inside or outside into any shape, changing length, width, depth, becoming straighter or more curved,
- (x) where at least one element, characterized by at least one emitter, receptor, bump, dot, pixel, tube, optic fiber, or lens, can scan in a predetermined pattern to receive and /or transmit a signal,
- (y) where the elements can be mounted in or on shapes including flat or curved surfaces,
- (z) where a signal including a beam can play across the elements, characterized as at least one emitter, circuit, receptor, data storage unit, bump, dot, pixel, tube, optic fiber, or lens, in a predetermined pattern including like an electron gun, inputting a signal, stimulus, and/or other actions,
- (aa) where at least one element characterized by at least one emitter, receptor, data storage unit, bump, dot, pixel, tube, optic fiber, or lens, have certain specifications including being empty, hollow,

- (bb) where a plurality of elements, including at least one emitter, receptor, data storage unit, bump, dot, pixel, tube, optic fiber, or lens, are composed of a transparent, and/or polarizing material,
- (cc) where a plurality of elements, including at least one emitter, receptor, data storage unit, bump, dot, pixel, tube, optic fiber, or lens, can perform a task, including being printed, molded, inserted onto and/or into a surface including paper, cloth, concrete, plastic, metal,
- (dd) where a focusing means including a lens can bend light from and/or bend light into at least one such emitter, receptor, data storage units, bump, dot, pixel, tube, optic fiber, or lens,
- (ee) where at least one of the elements, including at least one emitter, receptor, data storage unit, bump, dot, pixel, tube, optic fiber, or lens, is stationary and at least one is moving around in a predetermined pattern,
- (ff) where at least one element, including at least one emitter, receptor, data storage unit, bump, dot, pixel, tube, optic fiber, or lens, can focus light, sound, radiation, electrons, positrons, magnetic fields, onto the surface of a an element including at least one emitter, receptor, data storage, bump, dot, pixel, tube, optic fiber, or lens,
- (gg) where a surface with varying, substantially non uniform patterns can be used to focus including light, sound, electromagnetic radiation, positrons, electrons, magnetic fields,
- (hh) where textures can be simulated with a plurality of elements including at least one emitter, receptor, data storage unit, bump, dot, pixel, tube, optic fiber, or lens,
- (ii) where the elements including at least one bump, dot, pixel, tube, optic fiber, or lens, can contain an emitter and receptor with a divider between them.

2. A device as claimed in Claim 1:

- (a) that can have signals including light, sound, magnetic fields, electrons, positrons, pressure, come through from behind or reflected from the front,
- (b) where a screen can contain emitters and/or receptors including of sound, light, electromagnetic radiation, pressure in separate areas and/or a plurality are intermixed in any ratio,
- (c) where a plurality of elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens, can each be or have an overlay of a polarizing material in a predetermined polarizing direction, in a periodic, aperiodic, irregular pattern,
- (d) where receptors and emitters in a uniform, periodic or non uniform pattern can emit and receive signals including sonar, vibrations, pressure, data on earth tremors and vibrations, data on fish movements, boat movements, storms, hurricanes,
- (e) where the non uniform array of elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or

- lens, in any combination, can emit or receive signals including polarized light, laser light, sound, pressure, all electromagnetic frequencies,
- (f) where a phosphor material glows to direct light up at least one of the elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens, arrayed in a non uniform or periodic pattern in a plurality of positions,
 - (g) where signals including radar, sound, heat, electrons, positrons, magnetic fields, electromagnetic radiation excluding visible light can be focused with a reflecting and/or refracting means, and/or a parabolic mirror onto a curved focal plane, and where the same array can be an emitter,
 - (h) where other frequencies of light than red, green, and blue can be emitted and/or received,
 - (i) where the non uniform array of elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens, can be combined with elements including at least one colored dot, texture, matt finish, shiny surface, color, grayscale material,
 - (j) where signals including radar, light, sound, heat, pressure, magnetic fields, electrons, positrons can be emitted from a curved plane onto a reflecting and/or refracting, focusing means and be directed to a predetermined task,
 - (k) where signals including radar, light, sound, heat, pressure, magnetic fields, electrons, positrons can be emitted from a curved plane through at least one lens and be focused onto a surface.

3. A device as claimed in Claim 2:

- (a) where the elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens can direct the emissions on the edges of a display and/or receiver to make a predetermined non uniform or periodic pattern, synchronize with objects including neighboring displays and/or receivers, their edges,
- (b) where on the edges of the display and/or receptors, and/or on a plurality of selected sections, the elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens can make tiled displays and/or receptors connect in a predetermined non uniform or periodic pattern,
- (c) where parts including supports and braces can have elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens, in and/or through them,
- (d) where the edge between tiled displays and/or receptors has a predetermined shape including being less visible through a non uniform or periodic pattern of elements in a plurality of positions in the display and/or receptor,
- (e) where a non uniform or periodic pattern can also be used for visual effects including in tiling displays and/or receptors,
- (f) where a plurality of elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens are used on

- or in objects including a display, a helmet, an eyeglass display, a screen, walls of a room, a holodeck, on or in the ground, in the air, in any ratio,
- (g) where the elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens, can be parts of and connected to computer circuitry,
 - (h) where the elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens, can make electronic ears and eyes,
 - (i) where the elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens, can store data in their shape including their orientation, ratios, densities, and in changes to their structure,
 - (j) where the elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens, can contain conduits including wires, optical waveguides in a plurality of non uniform ways,
 - (k) where objects including walls, chairs, cloth can be covered substantially and interwoven with elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens that are non uniform and/or periodic in a plurality of places,
 - (l) where cloth can be made of elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens,
 - (m) where connections between parts of the elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens are by wires, optic fiber, tubes, signals by light, sound, electrons, positrons, magnetic fields, and are regulated by circuitry,
 - (n) where a periodic pattern of lenticular lenses or barriers to emit a 3D image is excluded as a periodic pattern herein,
 - (o) where fixed, non flexing glass columns extending from the surface in a uniform pattern to emit a 3D image are excluded.

4. A device:

A 2D/3D system:

- (a) where the receiving and/or emitting elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens, mirror, polarized element, textured element can be glued, attached, connected onto and/or into a surface, fabric, printed page, inserted onto and/or into a printed, cloth, moldable surface, to create and/or receive a 2D/3D image,
- (b) where the deformable materials used can include concrete, paper, plastic, that can be molded,
- (c) where additionally elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens can be

- molded with materials including plastic, metal, concrete, paper into place and printed shapes including dots added,
- (d) where elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens, on and in the surface can be rotated, reoriented, relocated to preferred positions to create and/or receive a 2D/3D image,
 - (e) where the elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens, can be etched and polarized in a plurality of non uniform positions and specifications, with any other objects defined in these claims in a periodic or uniform set of positions and specifications to create and/or receive a 2D/3D image,
 - (f) that can be disassembled into sections, each section with uses including as a 2D/3D display with a plurality of non uniform specifications in its elements, and where a plurality of 2D/3D displays and/or receptors can be assembled together to make a larger screen with a plurality of non uniform characteristics,
 - (g) where the objects as defined anywhere in these claims can contain or adjoin other such objects and other such elements in or on them, and so on as deeply as desired, and also they can overlap in a 2D/3D emitter and/or receptor,
 - (h) where the 2D/3D display and/or receptor has rotating elements including at least one rotating circuit, rotating element, rotating tube, rotating pixel, rotating bump, rotating lens, rotating mirror, rotating fiber, and rotating means any trajectory, direction, shape, curve,
 - (i) where display sources including liquid crystal displays and Cathode Ray Tube displays can be used to supply images to the 2D/3D display and/or receptor,
 - (j) where receptors including film, CCD's can be used as receptors,
 - (k) where the elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens can be solid, hollow, flexible, contain materials including wires, solids, liquids,
 - (l) where the surface can be an irregular, periodic wave like pattern or shape,
 - (m) where the data received in association with the 2D/3D device can be stored in a 3D pattern in a storage device,
 - (n) where pressure can be applied from below and/or above to change the shape of the elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens,
 - (o) where the non uniform pattern of a plurality of elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens in their orientation can give a particular image, use, effect,
 - (p) where textures including etched parts of the surface in a plurality of non uniform positions can assist in the storing of data, receiving and/or emitting signals,
 - (q) where at least one tube on and in the front and/or rear surface or other surface can change including altering orientation, shape, position, cross

- section while emitting and/or receiving image, data, sounds, radiation recording data, images,
- (r) where a plurality of non uniform elements in a 3D pattern can act as a barrier to view from some directions,
 - (s) where a plurality of the light bending and reflecting elements in a 2D/3D display and/or receptor can have a non uniform, periodic or aperiodic pattern,
 - (t) where a plurality of the lenses, focusing means have a different focal length, width, size, shape, and a differing focal plane shape,
 - (u) where a plurality of the rear and other surface areas have an irregular, non uniform, aperiodic, periodic, curved, cycloidal, parabolic, hyperbolic, slanted surface,
 - (v) where the emitters and/or receptors have a plurality of irregular locations, sizes, distances, shapes between them.
 - (w) where the walls of a building including a cinema can be covered with 3D screens, arranged on each wall,
 - (x) where the emitters and/or receptors can be in the shape of a part or whole of a shape including a cylinder on the inner and/or outer surface,
 - (y) where two or more focusing means including lenses, can focus onto an element including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens, in a non uniform array and record and/or display a stereoscopic picture.

5. A device as claimed in claim 4:

- (a) where it emits and/or receives, records and/or plays back including with light, sound, electrons, radar, sonar, low frequency waves, pressure, electrons, positrons, magnetic fields,
- (b) which can emit a first sound signal to attenuate a second sound signal by emitting that first sound signal in a 3D array including to substantially mimic the waves of the second sound signal, but out of phase to reduce its volume,
- (c) that can emit and receive 3D sounds of all frequencies in a directed manner in a 3D way, including of electromagnetic radiation and/or sound,
- (d) where the elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens are arrayed to emit and/or receive a 2D/3D signal,
- (e) where at least one emitter, receptor, data storage unit, bump, dot, pixel, tube, optic fiber, or lens can emit and/or receive changes in variables including heat, decay, time dilations, color changes, pressure,
- (f) where the 2D/3D display and/or receptor includes rotating colored balls, which can show different patterns in different directions.
- (g) where including light, positrons, electrons, magnetic fields can be emitted and/or received, and the data to and from the elements including at least

one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens can be emitted and/or received,

- (h) where a projector can emit a first signal onto the screen to cause a plurality of elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens in a non uniform or periodic array to emit a second signal.

6. A device as claimed in Claim 5:

- (a) where the display and/or receptor can include a wall hanging, any kind of display shape known in the art,
- (b) where a display and/or receptor can include being circular, spherical, cylindrical, periodic, irregular in at least one section,
- (c) where an object of a first shape with a 3D array of emitters and/or receptors on it transfers a signal to and/or from an object of a second shape with a 3D array of emitters and/or receptors on it,
- (d) where a laser can be reorientated and remodulated in response to a stimuli including radio waves, to emit a signal onto the inside of an object, sphere, with a plurality of receptors on or in its inner surface and those signals can be transferred to a device including a display, storage, conduit, tube,
- (e) where the signal can include data, imagery,
- (f) where the signal can include the characteristics of being analogue or digital and vary in ranges including brightness, loudness, contrast, color,
- (g) where the waves can be many kinds including coherent, incoherent, digital,
- (h) where the elements can form a tactile display in a plurality of non uniform areas in the distances, size, shape, width, depth between the elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens.

7. A device as claimed in Claim 6:

- (a) that can be placed in any shape around an object, in conjunction with receptors including cameras, CCD's to determine the scenery and objects around it, to display a 3D image so as to make the object appear substantially or wholly invisible, transparent, cloaked, from predetermined angles,
- (b) that uses a combination of 3D emitters and/or receptors using any 3D process known to the art to make an object appear in a predetermined way including transparent, invisible, cloaked,
- (c) to make the object covered substantially by a combination of 3D emitters and/or receptors appear to be at least one different object and other parts to appear different including substantially transparent, invisible, cloaked,
- (d) where including sound, radar, electromagnetic radiation can be altered including attenuated, cancelled out, reconstituted to include making the

object appear substantially transparent, opaque to these, and/or to substantially replace these signals with a different signal,

- (e) where a combination of 3D emitters and/or receptors can make an object appear to be substantially transparent, invisible, cloaked to including electromagnetic radiation, visible light, infra red radiation, radar, sonar, and/or to present a 3D image of at least one object in including electromagnetic radiation, visible light, sound, infra red, radar, sonar, pressure,
- (f) where a substantially or wholly transparently appearing combination of 3D emitters and/or receptors also displays a less transparent or opaque image, to create the partial appearance of including transparency, invisibility, cloaking, mimicry,
- (g) where a first 3D image can be partially transparent to overlay the first image on a second 3D image, such images can include scenery, data, computer graphics, to create the appearance of including transparency, invisibility, cloaking, mimicry,
- (h) where individual elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens, are affixed, inserted, attached, molded to make a 3D image to create the appearance of including transparency, invisibility, cloaking, mimicry,
- (i) where connections between parts of the elements including at least one emitter, receptor, data storage unit, circuit, bump, dot, pixel, tube, optic fiber, or lens are by devices including wires, optic fiber, tubes, and are regulated by circuitry to create the appearance of including transparency, invisibility, cloaking, mimicry,
- (j) where the elements can have characteristics including moving in and out and around, change shape to create the appearance of transparency, invisibility, cloaking, mimicry,
- (k) where the emitters and receptors can be mixed together in any ratio, in a periodic, aperiodic, uniform pattern to include creating the appearance of transparency, invisibility, cloaking, mimicry,
- (l) where multiple image screens can have image data transferred to a single combination of 3D emitters and/or receptors,
- (m) where the 3D elements can contain other elements and other elements in them, and so on as deeply as desired. to include creating the appearance of transparency, invisibility, cloaking, mimicry,
- (n) which can be wrapped around or formed on objects of any shape including a sphere, cylinder, a partial cylinder inside or outside, a chair, walls of a room,

8. A device:

- (a) A 3D surface used as a storage medium including in hard drives, optical discs, storage devices,

- (b) where the shape of the surface including an uneven, irregular, topography can be altered including being created, written to, read from and viewed as data,
- (c) where the shape varies in 3 dimensions instead of 2 like in CD's and DVD's,
- (d) where the surface can be altered by a device including a CD burner to create and/or alter the surface in a non uniform 3D pattern,
- (e) where the surface can be of a storage device including a hard drive or optical disc material, of materials used in a 3D display,
- (f) where the surface can alter in characteristics including shape, reflectivity, magnetization, charge, in response to including stimuli, pressure, light, sound, magnetic fields, positrons, electrons,

9. A device as claimed in Claim 8:

- (a) where elements on or in the surface of the storage medium can make a predetermined action including recording, reflecting, emitting signals, waves including magnetic fields, electrons, positrons, light, sound, electromagnetic radiation, data,
- (b) where the device can include sensors, receptors imbedded and/or emitters,
- (c) where the actions on the surface can include to be recorded on and/or read from by multiple sensors,
- (d) where a plurality of including tubes, wires, can connect to a plurality of including emitters and/or receptors, record and/or playback heads, lasers, that read and/or write to the 3D storage surface,
- (e) where the 3D storage surface can move including spinning, moving forwards and backwards, moving a first direction then a second direction,
- (f) where the surface can be made into any 3D shape,
- (g) where the surface can be altered in topography to create any kind of reflective and refractive pattern in 3D by a stimulus,
- (h) where the characteristics including transparency, refractive and reflective properties of the surface can be altered by an altering means including a CD burner, a stimulus to make a non uniform 3D pattern, to change including to remove, alter, erase data,
- (i) where the 3D surface can be changed including to be magnetized at a plurality of points to record and playback data,

10. A device as claimed in claim 9:

- (a) where tubes connect to nodes, where nodes contain circuits, 3D wiring, recording and/or playback,
- (b) where nodes can change including move about, in and out of an object, alter shape,
- (c) where nodes can be viewed, including be accessed by a plurality of including sensors, viewpoints, receptors,

- (d) where nodes can emit and/or receive including sound, light, heat, electromagnetic radiation, pressure, to and from preferred directions,
- (e) where at least one node has at least one tube, wire, optic fiber connected,
- (f) where nodes can act including block, close off, alter, let preferred signals, materials, gases, liquids, pass through them to other nodes, to including a circuit, receptor, emitter,
- (g) where viewers cause nodes to open parts of themselves including some facets and close other facets,
- (h) where viewers can include mechanical devices or human,
- (i) where the nodes can contain and/or be part of Boolean logic circuits,
- (j) where operations in and between nodes can include erasure, calculation
- (k) where all group theory patterns can be created in switching,
- (l) where the array can be reconfigured in real time,
- (m) where some dimensions, views are common to a plurality of viewers and some are unique to a viewer,
- (n) where the viewer is replaced, augmented including by a mechanical device at times,
- (o) where data is stored including in a multidimensional lattice,
- (p) where nodes can alter their configuration including to create specialized circuits, improve their connection, optimize circuits,
- (q) where data on connections between nodes is stored including in a 3D lattice,
- (r) where all kinds of circuits known in the art can be used herein,
- (s) where tasks can be broken up into sub tasks to be done by specialized arrays of nodes,
- (t) where nodes can be constructed including being molded of plastic, concrete, paper, metal, and additional elements added,
- (u) where nodes can contain 3D imaging and/or playback devices, 3D wiring,
- (v) where viewers can include operating in pairs and higher numbers coordinated together,
- (w) where nodes have at least one facet,

11. A device as claimed in Claim 10,

- (a) where tubes are used including in circuitry to conduct signals including optical and/ or electric between nodes,
- (b) where tubes are used to channel light including to and from a display surface,
- (c) where tubes are used to channel data including to and from a storage surface,
- (d) where tubes can intersect each other partially or wholly including to transmit a signal,
- (e) where the tubes can contain polarizing material,
- (f) where the tubes can contain transparent material or be hollow,
- (g) where the tubes can contain wires,
- (h) where the tubes can connect to circuitry,

- (i) where the tubes can change including flexing and moving, in and out of a surface in response to a stimuli,
- (j) where the tubes can be deployed including be woven together like a cloth, rope,
- (k) where the tubes including hollow or filled can be used as wires in any kind of circuitry,
- (l) where the tubes can be any size, shape, cross section,
- (m) where the hollow tubes can join other hollow tubes,
- (n) where a lattice, array of tubes includes use in a form of RAM,
- (o) where hollow or filled tubes can be used in including long term memory, random access memory, 3D memory,
- (p) where the tubes can contain gases, vacuum, liquids, solids, circuitry,
- (q) where the tubes are regulated in circuits including by a computer clock,
- (r) where tubes can receive and/or emit a signal of including sound, pressure, light, lasers, electromagnetic radiation, electrons, positrons, sonar, radar,
- (s) where a first viewer can input data at a first point in the lattice and a second viewer can view it at a second point,
- (t) where the lattice of tubes, wires, connectors can be a uniform, periodic or non uniform array,

12. A device as claimed in claim 11,

- (a) where a signal emitter and/or receiver including at least one light beam, laser beam, sound waves, beam of electrons, beam of positrons, a magnetic field, beam of electromagnetic radiation can be directed including deflected, reflected, focused across the ends of including tubes, optic fibers, lenses in a predetermined pattern sequentially to transfer data to and/or from a display and/or receptor,
- (b) where a plurality of emitters, receptors, lasers, electron guns, lights, sounds, electrons, positrons, magnetic fields can be directed onto and/or into the ends of devices including tubes, optic fibers, lenses in a predetermined pattern to transfer signals to and/or from an image emitter and/or receiver,
- (c) where a signal emitter and/or receptor can move including rotate, alter orientation, vibrate, oscillate, according to a stimulus to direct a signal on the tube, optic fiber ends in a predetermined pattern to transfer a signal to and/or from a display and/or receptor,
- (d) where a deflecting means can move including oscillate, vibrate, alter orientation according to a stimulus to move and/or receive at least one signal including a light beam, laser beam, sound waves, beam of electrons, beam of positrons, a magnetic field, beam of electromagnetic radiation in a predetermined pattern across and/or into and/or out of a device including a tube, optic fiber, emitter, receptor,

lens, mirror to transfer a signal to and/or from a display and/or receptor.

- (e) where the signal can be modulated by a system in which at least three polarized shapes including plates are set, the two outer at substantially 90 degrees polarity to each other, and at least one plate moves including by rotation relative to the other plate or plates to modulate a signal of including electromagnetic radiation, light passing through it, and the central plate polarization can be changed including removed to alter the signal, and where other devices including liquid crystals can be used as well as or instead of the plates,
- (f) Where reflectors and/or refractors, mirrors and/or lenses are moved including vibrated, moved, altered in shape, changed in orientation to move at least one signal including a laser beam, light beam, sound waves, magnetic field, over a screen in a predetermined pattern to form an image,
- (g) where the signal including a laser, light, sound, magnetic field can make the display surface glow, emit a second signal, stimulate a response from at least one element on or in the screen,

13. A Device as Claimed in Claim 12:

- (a) where data is arranged in higher than 3, 4 dimensions and can be displayed in groups of 2, 3, 4 dimensions,
- (b) where a first plurality of dimensions are worked with and then a second plurality of dimensions are observed, worked with,
- (c) where programs including games, operating systems, file managers, databases, spreadsheets, can be made of environments in higher than 4 dimensions and where one can sequentially look at and interact with a subset of those dimensions, and which can also use the 2D and 3D surfaces described herein to be viewed on,
- (d) where the devices including logic circuits can act in higher dimensions,
- (e) where points on or in the surface of the display and/or receptor are calculated to find the angle the signal must exit or enter the surface element, and where no single element is in the desired position, orientation, the signal may be averaged according to an algorithm over a plurality of elements,